MILWAUKEE AREA ATARI USERS CLUB

MILATARI NEWSLETTER

Volume 3 Number 3

February 1984

Price $1.ØØ

EXPOSIUM 84
THE TOTAL OFFICE SHOWCASE and CONFERENCE

MILATARI, as a member of the Computer Users Federation of South East Wisconsin, is a sponsoring group of EXPOSIUM 84. The exposium will be held from Tuesday, April 24th thru Thursday, April 26th. You can see the activity schedule on page 3.

The show will consist of exhibits which will include major manufactures of office automation equipment, most computer dealers in the metro-Milwaukee region, and many office and computer supply dealers. All the sponsoring organization will have information booths on the exhibit floor. These groups include the Computer Users Federation of South East Wisconsin (the group we are affiliated with), the Office Technology Management Association, Association of Records Managers & Administrators, Wisconsin Telecommunications Association, Data Processing Management Association, Association for Information & Image Management, and Administrative Management Society.

As you will notice on the activity schedule listed on page 3, there seminars programmed throughout the exposium. In fact there are a total of 44 seminars scheduled. CUF was instrumental in arranging 4 of the seminars to be held this year. Here is an outline of the sessions which were arranged by CUF;

Session 13 - Computers 1985 & 1995: Better Plan for them Now - Tue. 6:00-8:00PM
Speaker: Franklynn Peterson, Syndicated Columnist - The Business Computer, Madison, Wisconsin.

In 1985, computer users (large & small) will be trying desperately to get the most out of megabytes of memory, "integrated" software, and IBM compatibility. In 1995, computer users will be trying desperately to get the most out of gigabytes of memory, "integrated" software, and IBM compatibility. If you're not already planning for 1985 and 1995 computer use, you're wasting money, time, and talent. This presentation will, while fascinating you with glimpses into minds of computer planners, leave you with pages full of specific guidelines and rules of thumb to help you plan wisely.

Session 15 - Telecommunications and the Home Computer Owner - Tue. 6:00-8:00PM
Speaker: John Taylor, Taylor Electric, Milwaukee, Wisconsin.

What's involved in setting up a home system to access the local bulletin boards or national information services? What type of information is available from each type? How much will it cost to access them? The answers to these questions along with a demonstration of some of these systems will be given by John Taylor. As operator of Milwaukee's oldest public access bulletin board service, MAUDE, and its newest pay information service, MICROSHARE, John is well qualified to give advise to the home user.

Session 29 - Word Processing on a Personal Computer - Wed. 6:00-8:00PM
Speaker: Alex Thien, Columnist for the Milwaukee Sentinel, Milwaukee, Wisconsin.

Alex Thien of the Milwaukee Sentinel will conduct a seminar on choosing a word processing program to suit your needs and computer. Alex draws on his experience as a writer using both mainframe and personal computer word processors to help set up guidelines for selecting the program that will best suit your needs.

Session 31 - Small Business and Personal Computing - Wed. 6:00-8:00PM
Speaker: William M. Berggren, William M. Berggren Associates, Racine, Wisconsin

Micro-computers have changed the way that America does business. And American business has discovered three powerful tools for using small computers even more effectively - Word Processing, Electronic Spread-Sheet and Data Management Software.

This program will help you understand personal and office computers, and what they can do for you, your office, or organization. Define your needs in terms of information needs and in terms of available off-the-shelf products. Then select the right computer and software for your needs. Use these products effectively once the decision is made to purchase and install them.

(continued on page 18)

INTRODUCING EXPOSIUM 84

The 12th annual, brand-new, Total Office Showcase and Conference.

Office Technology Management Association (formerly Word Processing Society Inc.) is proud to present Exposium 84, the Midwest's largest office technology conference and exposition. This bigger-than-ever 12th annual Exposium is brand new, because for the first time it is being presented in conjunction with: Data Processing Management Association–Milwaukee Chapter, Administrative Management Association–Milwaukee Chapter, Wisconsin Telecommunications Association, Association for Information & Image Management–Wisconsin Chapter, Association of Records Managers & Administrators–Milwaukee Chapter, and Computer Users Federation.

As a result of this unique joint effort, Exposium 84 offers you the most comprehensive selection of seminars and exhibits to broaden your horizons and address every aspect of the office and its technology: computers, word processors, micrographics, telecommunications, records management, as well as personal development topics.

And, as an added feature, Exposium 84 will extend its seminar hours into evening to accommodate those individuals unable to attend the morning and afternoon seminars. Evening sessions will feature personal and home computing topics, word processing, and educational uses of computers. In addition, hands-on sessions will be offered so that seminar attendees can actually learn how to operate professional and personal computers, word processors, and even electronic typewriters.

ACTIVITY SCHEDULE

Sunday, April 22, 1984

8:00-6:00 p.m.	Exhibits Set-up

Monday, April 23, 1984

8:00-8:00 p.m.	Exhibits Set-up

Tuesday, April 24, 1984

7:00- 6:30 p.m.	Registration (MECCA)
7:30- 8:45 a.m.	Industry Breakfast (Hyatt Regency)
8:45-11:00 a.m.	Seminars (MECCA)
9:45-10:00 a.m.	Coffee Break
10:00- 6:00 p.m.	Exhibits (MECCA)
12:00- 1:30 p.m.	Luncheon and Keynote Speaker (Hyatt Regency)
1:30- 3:45 p.m.	Seminars (MECCA)
2:30- 2:45 p.m.	Coffee Break
3:45- 5:45 p.m.	Hands-on sessions (MECCA)
6:00- 8:00 p.m.	Seminars & Hands-on sessions (MECCA)
7:00-11:00 p.m.	Gala Event (Hyatt Regency)

Wednesday, April 25, 1984

7:00- 6:30 p.m.	Registration (MECCA)
7:30- 8:45 a.m.	Breakfast (Hyatt Regency)
8:45-11:00 a.m.	Seminars (MECCA)
9:45-10:00 a.m.	Coffee Break
10:00- 8:30 p.m.	Exhibits (MECCA)
12:00- 1:30 p.m.	Luncheon (Hyatt Regency)
1:30- 3:45 p.m.	Seminars (MECCA)
2:30- 2:45 p.m.	Coffee Break
3:45- 5:45 p.m.	Hands-on sessions (MECCA)
6:00- 8:00 p.m.	Seminars & Hands-on sessions (MECCA)

Thursday, April 26, 1984

7:00- 2:00 p.m.	Registration (MECCA)
7:30- 8:45 a.m.	Breakfast (Hyatt Regency)
8:45-11:00 a.m.	Seminars (MECCA)
9:45-10:00 a.m.	Coffee Break
10:00- 6:00 p.m.	Exhibits (MECCA)
12:00- 1:30 p.m.	Luncheon (Hyatt Regency)
1:30- 3:45 p.m.	Seminars (MECCA)
2:30- 2:45 p.m.	Coffee Break
6:00 p.m.	Conference Adjourns

THE EXHIBITS—

An Integral Part of Exposium 84

Exposium 84 will provide a marketplace in which national manufacturers and local vendors will be able to display their products and services. This showcase is for everyone, especially those who are not content to have their offices remain in the past. Even if you have recently purchased equipment, stop in to see the other products and services that can enhance your capabilities.

The exhibit hours have been designed to provide you maximum time to view and study the wide range of products and services presented at a nominal charge.

Exhibit Admission — $5.00
(admission included with purchase of seminars)

Exhibit Hours

April 24, 1984 — 10:00-6:00 p.m.
April 25, 1984 — 10:00-8:30 p.m.
April 26, 1984 — 10:00-6:00 p.m.

April 24 — luncheon

Keynote Speaker

Ira A Penn, CRM
Editor of the
ARMA Records Management Quarterly
Silver Spring, MD

No Thanks, I've Already Had Some

In the past, managers have tried many diverse approaches in attempting to solve their office productivity problems. For the most part, the methods and techniques used have been unsuccessful. Judging from the record to date, the latest effort — office automation — may fair no better than others.

EXPOSIUM 84
VOLUNTEERS ARE NEEDED

As you are aware EXPOSIUM 84 is a national conference and exhibition co-sponsored this year by OTMA, AMS, AIIM, ARMA, CUF, DPMA, and WTA. It is expected to be the biggest show of its kind Milwaukee has ever seen. What better way to become a working part of EXPOSIUM 84, than volunteering for one or more of the tremendous success. You will have an opportunity to meet a larger portion of those attending our production, plus the added bonus of having many enjoyable memories to take with you.

MILATARI, along with the other members of CUF, will be providing volunteers for EXPOSIUM 84. If you are interested in attending one of the seminars, why not volunteer to be a host for that session and get to take it in at no-charge. Want some hands on experience on a Wang or a DEC, try hosting a Hands on Session. What ever your talents are - we can find a slot for you. President Gary Nolan has asked Sharon Gamache to act as MILATARI's volunteer chairperson. You can call Sharon at 421-2887 to sign up. Do it today before all the best slots are taken.

INFORMATION DESK - Aid attendees in locating seminar rooms, rest rooms, hands-on sessions or whatever. Maps and schedules will be available to help you.

HOSTING SEMINARS - As a host/hostess you will collect tickets, check with the speaker to ensure that he/she is satisfied with the room, audio visuals, whether or not they would like help in distributing handouts, etc. Distribute and collect evaluation sheets. Then relax and enjoy the seminar. Speakers introduce themselves.

HOSTING HANDS-ON SESSIONS - As a host/hostess you will collect tickets, insure the room is full. In cases where there is still room available you will notify the person in charge. When problems arise you report them to the person in charge.

GALA EVENT - Collect tickets or money from the attendees before allowing them into the function.

EXHIBITS REGISTRATION - Check that each attendee has a ticket, otherwise collect money, make sure ticket is completely filled in, hand out guidebook and supplement before attendee enters the computer registration area.

COMPUTER REGISTRATION - Using Wang word processing equipment, key in the information from the registration tickets. Wang word processing operators are especially requested to sign up. But, if you work on other equipment or know how to type, we will show you how to use the Wang equipment. Once the registrant's information is processed into the system, a name tag is printed. Volunteers will take them off the printers and hand them to the registrants.

VENDOR REGISTRATION - Here is your chance to meet the vendors who will be displaying their wares. You will be typing and handing out vendor name tags and be asked to do some other miscellaneous activities.

CUF BOOTH - Man the booth for CUF - the Computer Users Federation - passing out information about MILATARI and many other Milwaukee area computer users groups.

INDUSTRY BREAKFAST - You will be acting as host/hostess at a table which has been designted to your specific industry or area of interest. Conversations this early can sometimes be slow in starting (especially when you don't know anyone). Therefore, it will be up to you to introduce everyone and get the ball rolling. Many exciting things have been discussed around these breakfast tables.

STUDENT CENTER AND GUIDES - Explain the concepts of Exposium and what they (the students) will be seeing when they enter the exhibit hall. You will distribute student passes and provide instructors with a packet of literature. You will then guide groups of students through the exhibit hall. This will be a good way for you to become familiar with the exhibits.

INTRODUCING EXPOSIUM 84

The 12th annual, brand-new, Total Office Showcase and Conference.

Office Technology Management Association (formerly Word Processing Society Inc.) is proud to present Exposium 84, the Midwest's largest office technology conference and exposition. This bigger-than-ever 12th annual Exposium is brand new, because for the first time it is being presented in conjunction with: Data Processing Management Association–Milwaukee Chapter, Administrative Management Association–Milwaukee Chapter, Wisconsin Telecommunications Association, Association for Information & Image Management–Wisconsin Chapter, Association of Records Managers & Administrators–Milwaukee Chapter, and Computer Users Federation.

As a result of this unique joint effort, Exposium 84 offers you the most comprehensive selection of seminars and exhibits to broaden your horizons and address every aspect of the office and its technology: computers, word processors, micrographics, telecommunications, records management, as well as personal development topics.

And, as an added feature, Exposium 84 will extend its seminar hours into evening to accommodate those individuals unable to attend the morning and afternoon seminars. Evening sessions will feature personal and home computing topics, word processing, and educational uses of computers. In addition, hands-on sessions will be offered so that seminar attendees can actually learn how to operate professional and personal computers, word processors, and even electronic typewriters.

ACTIVITY SCHEDULE

Sunday, April 22, 1984

8:00-6:00 p.m.	Exhibits Set-up

Monday, April 23, 1984

8:00-8:00 p.m.	Exhibits Set-up

Tuesday, April 24, 1984

7:00- 6:30 p.m.	Registration (MECCA)
7:30- 8:45 a.m.	Industry Breakfast (Hyatt Regency)
8:45-11:00 a.m.	Seminars (MECCA)
9:45-10:00 a.m.	Coffee Break
10:00- 6:00 p.m.	Exhibits (MECCA)
12:00- 1:30 p.m.	Luncheon and Keynote Speaker (Hyatt Regency)
1:30- 3:45 p.m.	Seminars (MECCA)
2:30- 2:45 p.m.	Coffee Break
3:45- 5:45 p.m.	Hands-on sessions (MECCA)
6:00- 8:00 p.m.	Seminars & Hands-on sessions (MECCA)
7:00-11:00 p.m.	Gala Event (Hyatt Regency)

Wednesday, April 25, 1984

7:00- 6:30 p.m.	Registration (MECCA)
7:30- 8:45 a.m.	Breakfast (Hyatt Regency)
8:45-11:00 a.m.	Seminars (MECCA)
9:45-10:00 a.m.	Coffee Break
10:00- 8:30 p.m.	Exhibits (MECCA)
12:00- 1:30 p.m.	Luncheon (Hyatt Regency)
1:30- 3:45 p.m.	Seminars (MECCA)
2:30- 2:45 p.m.	Coffee Break
3:45- 5:45 p.m.	Hands-on sessions (MECCA)
6:00- 8:00 p.m.	Seminars & Hands-on sessions (MECCA)

Thursday, April 26, 1984

7:00- 2:00 p.m.	Registration (MECCA)
7:30- 8:45 a.m.	Breakfast (Hyatt Regency)
8:45-11:00 a.m.	Seminars (MECCA)
9:45-10:00 a.m.	Coffee Break
10:00- 6:00 p.m.	Exhibits (MECCA)
12:00- 1:30 p.m.	Luncheon (Hyatt Regency)
1:30- 3:45 p.m.	Seminars (MECCA)
2:30- 2:45 p.m.	Coffee Break
6:00 p.m.	Conference Adjourns

THE EXHIBITS—

An Integral Part of Exposium 84

Exposium 84 will provide a marketplace in which national manufacturers and local vendors will be able to display their products and services. This showcase is for everyone, especially those who are not content to have their offices remain in the past. Even if you have recently purchased equipment, stop in to see the other products and services that can enhance your capabilities.

The exhibit hours have been designed to provide you maximum time to view and study the wide range of products and services presented at a nominal charge.

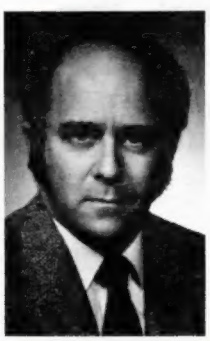
Exhibit Admission — $5.00
(admission included with purchase of seminars)

Exhibit Hours

April 24, 1984 — 10:00-6:00 p.m.
April 25, 1984 — 10:00-8:30 p.m.
April 26, 1984 — 10:00-6:00 p.m.

April 24 — luncheon

Keynote Speaker



Ira A Penn, CRM
Editor of the
ARMA Records Management Quarterly
Silver Spring, MD

No Thanks, I've Already Had Some

In the past, managers have tried many diverse approaches in attempting to solve their office productivity problems. For the most part, the methods and techniques used have been unsuccessful. Judging from the record to date, the latest effort — office automation — may fair no better than others.

MONITOR OUTPUTS FOR THE ATARI 400

by Bill Lynn

(This article is reprinted from P.A.C.E. World, the newsletter of the Peninsula Atari Computer Enth. in Hampton, Virginia..ED)

Inveterate hacker that I am, I just had to have a monitor output from my 400. Inspection of the 400 and 800 schematics showed only minor differences in the video and audio circuitry, and the following is the result of three almost all-nighters.

The mods are actually two circuits: One is a buffer to boost the composite video level a bit and provide a low impedance output; The other is a low power audio amplifier to provide headphone or speaker drive. Power supply capacity limits the audio to a comfortable listening level but it can drive your audio system if you need more. With two hundred watts RMS you can feel the ship shudder when you launch a photon torpedo.

Construction is conventional using wire wrap techniques or perforated board. The circuits will easily fit on a 2" board which can mount in the hollow space in the left rear of the 400's case. Drill holes in the rear of the case for connectors and the volume control, and be sure nothing shorts against the metal casting inside. A D.I.N. type output connector matches that found on an 800, but if your monitor has different cabling, feel free to match that. The audio output also feeds a separate connector to attach a speaker. Use whatever jack matches If you don't have a monitor but want the output to the stereo, you can build just that, in which case replace the volume control with a trim pot, eliminate the video output connector and drill two fewer holes in the case. Set the trimmer to match the loudness of other components in your system. (Full volume can overdrive and distort most stereos)

The video will drive any standard black and white or color monitor. RGB (Red,Green,Blue) outputs, so beloved of videophiles, are not available from the ANTIC chip. Beware of green or amber monitors; The phosphor is sometimes a long-persistence type that is good for text but will smear badly on games. Try before you buy. New color monitors can be had for $300 and up. (Target is selling a BMC color monitor for $249 ..ED) But if you had that kind of money, you probably bought an 800 to start. Haunt the places which repair commercial arcade games; good used monitors are sometimes available.

All the parts are common items, available by mail. Check the back pages of Byte or Computers and Electronics. Most, but particularly not the 733 chip, are on the wall in the back of a Radio Shack store. You should be able to get away for about half the price of a good game cartridge. (The D.I.N. plug from Radio Shack is not recommended. The matching 800 style jack is OK. Try an audio equipment dealer for good D.I.N. connectors.)

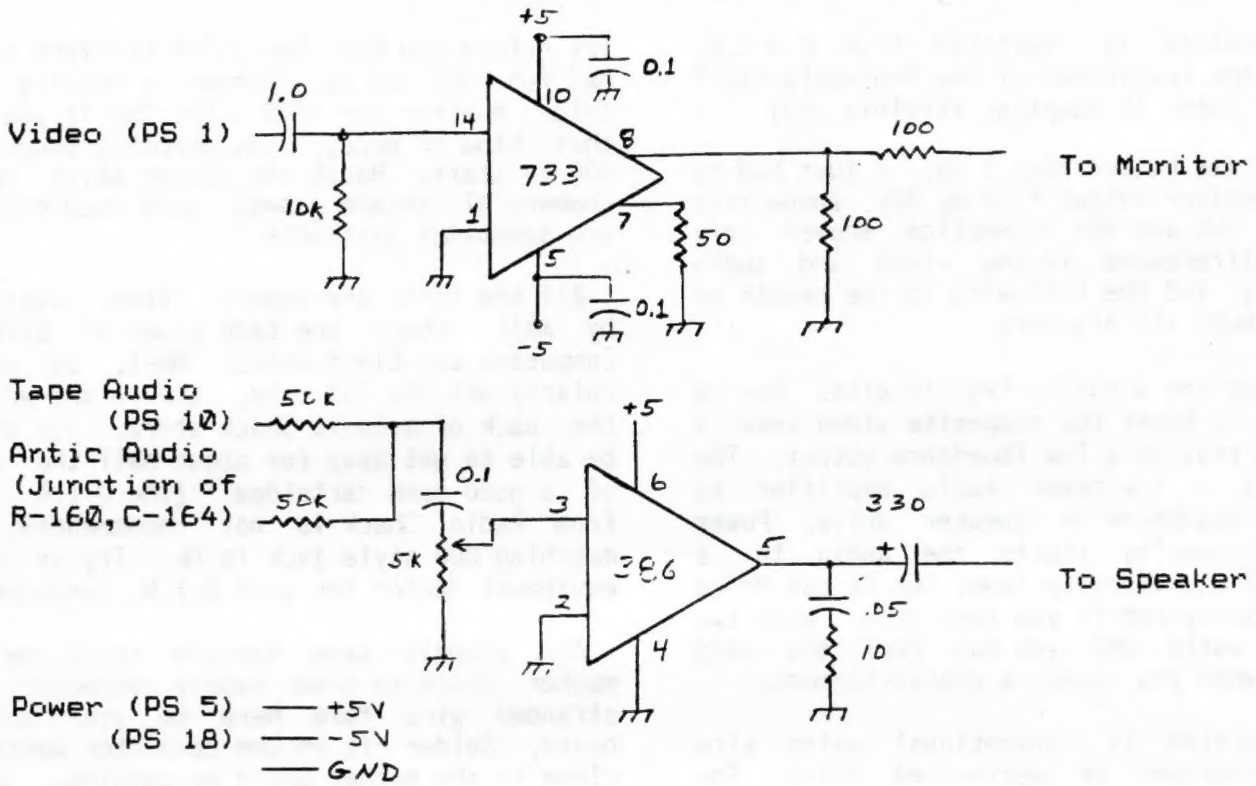
All signals save one are found on the mother board to power supply connector. Use stranded wire form here to your monitor board; Solder it to the connector posts as close to the mother board as possible. Audio signals can be brought from the POKEY chip to a spare pin on this connector and thence to the monitor circuit. Find the junction of R160 and C164, under the metal base plate, and jumper from here to pin 19 or 20 on the power supply connector. Be careful soldering to the 400 circuit board. Use small solid wire, (#30 wire wrap wire is good here) and avoid shorting adjacent traces. A suggestion is to make a very small hook in the wire to wrap around the component pin and lead the wire away from the pin in the same direction the trace leaves the pin. Use a minimum of solder and fold a bit of tape around the wire where it passes out from under the metal shield. Sockets for the I.C.'s are optional. Check the power supply and electrolytic capacitor polarity twice before applying power.

If you have any problems, leave me a message on the PACEBOARD, our local Atari bulletin board, 804-722-0935 noon to 11pm daily.

Incidentally, these circuits are not limited to an Atari. An identical board resides inside my Color Computer.

(see schematic on page 6)

MONITOR OUTPUT SCHEMATIC



Note: "PS" designation refers to power supply-to-mother board connector.
Resistor values in ohms, capacitor values in microfarads.

PARTS LIST

LM-733 I.C. video amplifier.
LM-386 I.C. audio amplifier.
5K single turn volume control.
Connectors as appropriate.
All fixed resistors 1/4 watt 10% .
All capacitors 25 volt or higher ceramic or metallized polyester except 330 uf. 25 volt electrolytic.

WANT ADS

FOR SALE: Atari 850 Interface and Atari 825 Printer - $300 for Both
See Bruce Chandler at meeting or call 1-594-3360

FOR SALE: MICROCONNECTION direct connect modem - 300 BAUD $100
Direct connect to phone line - Has autodial capabilities
See Dave Frazer at meeting or call 542-7242 after 6:PM

A FIX FOR YOUR MOSAIC RAM SELECT BOARD

(This information was printed in the MOSAIC 64K Select Newsletter)

400 ONLY HARDWARE FIX

We have been getting a number of inquiries about the 400 ONLY RAM SELECT, as to why some software won't boot. Never fear the fix is here.

The problem comes from the software logic that checks to see if there is adequate memory available. Most new software is now written with modified logical that eliminates this problem. But there is still a lot of older software around and will continue to be so.

This fix will give the ability to the user to deselect the bank memory areas on the board. The user will have the option to switch between a 48K or 64K machine. It should be noted that the fix requires many technical skills, including soldering, identifying printed circuit traces and I.C.s The fix is NOT intended for the non-technical user. So, please don't attempt it if you have even the slightest doubt of your skills.

First, you must disassemble your 400 EXACTLY as you did when you installed the board, being careful not to damage the connector between the mother board and power supply. Next remove the Ram Select board, carefully, removing the 16 pin dip jumper cable from the front. Once this is accomplished and the board is free we can get to the fun part.

You will need a low power soldering iron (25 watts or so), a single pole double throw toggle switch that can be mounted through the 400's case (so you can have easy access to it), an exacto knife (to cut printed circuit traces, OH NO!), approx. two feet of stranded 22-24 awg wire, one 4.7K ohm 1/4W resister and a little patience.

1. Locate pin 11 of U17, cut the trace that runs between pins 11 and 12. Make sure you have located the right trace.

2. Solder the 4.7K ohm resister from pin 11 of U17 to pin 14 of U17. Since pin 14 is Vcc, this is a pullup resister.

3. Using your wire and switch arrangement, solder one side of the switch to pin 11 of U17 and the other to pin 11 of U18.

Once you have completed the above steps you may place the switch anywhere in the 400's case that is convenient.

Make sure to note which way the switch is open and closed. The banks will be disabled whenever the switch is open and enabled when closed. When the banks are disabled the machine will only recognize 48K just as any full configured ATARI 800. This fix has worked well in the past for us. We're sure it will cure any compatibility problems you may have had.

400-800 HARDWARE FIX

The same fix is available for the 400-800 board with much less strain. There are strapping posts located in various locations on the board. The one we are concerned with is on the far left of the board (with the card edge connector towards you) called 'B'. Normally this strap is set to the zero position, meaning board zero. If you move the strap to the one position you can have the best of both worlds. With the strap in the one position, on power up the computer will only recognize 48K but the banks are still available to you. Normally the first bank is selected by poking location 65472 decimal with any value. When B strap is set at one your first bank will now be selected by poking 65472+16 or 65488. The software boot fix that comes with the 400-800 manual deselects all banks rendering them useless.

==========

CALL FOR ART WORK

We need art work for the cover of this newsletter! The reward will be a disk from the club library and a brief word about the artist.

The cover should cover some aspect of computer activity or make some point about the Atari. Please help us out. Thanks.....ED.

DEMOPAC #7

SOME SPECIAL FEATURES

Examples and discussions of special graphics features
using BASIC with machine language routines

1) Redefining Characters
2) Vertical Smooth Scrolling
3) Horizontal Smooth Scrolling

Information provided by:
ATARI Inc.
CONSUMER PRODUCT SERVICE
PRODUCT SUPPORT GROUP
1312 Crossman Ave.
Sunnyvale, CA 94086

REDEFINING CHARACTERS

JB 8/82

The Operating System maintains a pointer to the ROM character set, which can be changed to point to your own character set in RAM. You are free to define an entire set at a RAM location of your choosing, or you may call the ROM set down into RAM and redefine only a few of the characters. The redefined characters appear on the screen in any text mode when the corresponding internal character code is placed in screen RAM, either by the display handler or by your program.

The program on the following page illustrates some techniques for redefining characters. The example uses an arbitrary RAM location (page 12 of memory) for the redefined set. Since it uses regular characters as well as redefined ones, the program calls the existing set from ROM into RAM, and redefines characters 1-7. The character numbers are the internal codes, and reflect the order of the ROM set. A chart of internal codes can be found on page 55 of the BASIC Reference Manual.

Characters 1-7 are chosen because they are special (non-letter) characters and are not used elsewhere in the program. Character number 0 is the space, so it cannot be redefined without filling the screen with the new character.

PEEKing each ROM location and POKEing into RAM takes a long time, so the actual transfer of data is accomplished with a simple USR call. The example uses upper case only, so the first half, or upper case set is called down. Each character requires 8 bytes of data, so the first half, 64 characters, takes 512 bytes. In the machine language routine, two loops of 256 bytes are used to accomplish the transfer.

Once the set is in RAM, new data is POKEd into the locations of characters 1-7. Again, 8 bytes of data are required for each character definition.

In order to access the new character set, location 756 (CHARBASE) is pointed to the chosen RAM location. In the example, the redefined characters are POKEd directly into screen RAM, and the original characters are PRINTed. This is for convenience; the redefined characters may be PRINTed, but you would have to refer back to the original character. For example, to get character number 1, you could use the statement:

```
POKE <screen location>,1 or
POSITION <screen location>: PRINT #6;"!"
```

The exclamation point is the original number 1. If you use POKE, you do not have to keep track of the correspondence between original and redefined characters.

A simple animation effect is achieved by POKEing each redefined character into the same location, in series. Changing the length of the delay loop changes the speed of the animation.

```
 1 REM REDEFINE CHARACTERS
 2 REM JB 8/82
 3 REM call character set from ROM into RAM with a USR function (listing
 4 REM follows), redefine 7 characters (#1-7 of internal set)
 5 REM then display characters in series for animation effect.
 6 REM ************************************************************************
 10 GRAPHICS 2:REM .                          set up mode 2 screen
 20 CHBAS=12:REM .                            new char set starts on page 12
 30 REM .                                     (arbitrary location away from screen)
 40 REM ************************************************************************
 50 DATA 104,169,0,133,204,133,206,169,224,133,205,104,104,133,207,162,2,160
 55 DATA 0,177,204,145,206,136,208,249,230,205,230,207,202,208,240,96
 60 FOR I=1536 TO 1569
 70 READ X:POKE I,X:REM .                     poke in codes for usr function
 80 NEXT I
 85 REM ************************************************************************
 90 X=USR(1536,CHBAS):REM .                   pass address of new char set
 95 REM ************************************************************************
100 FOR CHAR=1 TO 7:REM .                     redefine characters 1-7
110 POS=(CHBAS*256)+(CHAR*8):REM .            address of character in new set
111 DATA 255,129,189,165,165,189,129,255
112 DATA 0,126,66,90,90,66,126,0
113 DATA 0,0,60,36,36,60,0,0
114 DATA 0,0,0,24,24,0,0,0
115 DATA 0,0,36,24,24,36,0,0
116 DATA 0,102,102,24,24,102,102,0
117 DATA 231,231,231,24,24,231,231,231
119 REM ************************************************************************
120 FOR X=0 TO 7:REM .                        poke in bit pattern for character
130 READ A:POKE (POS+X),A
140 NEXT X:REM .                             each character is 8 bytes long
150 NEXT CHAR
155 REM ************************************************************************
160 POKE 756,CHBAS:REM .                      point to new character set
170 SCR=PEEK(88)+256*PEEK(89):REM .           starting location of screen RAM
180 PRINT #6;"REDEFINED CHARACTERS"
190 FOR I=1 TO 7:POKE SCR+46+I,I:NEXT I:REM look at individual characters
200 POSITION 0,4:PRINT #6;"  ANIMATION EFFECT:"
210 REM ************************************************************************
220 FOR I=1 TO 7:REM .                        display characters in series
230 POKE SCR+130,I
240 FOR DELAY=1 TO 25:NEXT DELAY
250 NEXT I
260 FOR I=6 TO 2 STEP -1:REM .                run series backwards
270 POKE SCR+130,I
280 FOR DELAY=1 TO 25:NEXT DELAY
290 NEXT I
300 GOTO 220
```

```
                10 ;MOVE CHARACTER SET
                20 ; USR ROUTINE
                30 ; JB 8/82
                40 ;
                50 ;  DEFINITIONS
                60 ;
                70 CHARSET      =     $CC       ;free bytes on zero page
                80 NEWSET       =     $CE       ;two more  free  bytes  on  zero
page
                90 ;
0000            0100            *=    $6000
0600 68         0110            PLA             ;take # of parameters from stack
0601 A900       0120       LDA  #0
0603 85CC       0130       STA  CHARSET
0605 85CE       0140       STA  NEWSET          ;lo bytes are both 0
0607 A9E0       0150       LDA  #$E0
0609 85CD       0160       STA  CHARSET+1     ;hi-byte of ROM character set
060B 68         0170       PLA
060C 68         0180       PLA             ;hi-byte of new  location  passed  on
stack
060D 85CF       0190       STA  NEWSET+1
060F A202       0200       LDX  #2         ;outside loop (2 loops of 256)
0611 A000       0210LOOP1  LDY  #$00
0613 B1CC       0220LOOP2  LDA  (CHARSET),Y    ;get value from ROM location
0615 91CE       0230       STA  (NEWSET),Y     ;move to RAM location
0617 88         0240       DEY
0618 D0F9       0250       BNE  LOOP2           ;do 256 bytes
061A E6CD       2051       INC  CHARSET+1
061C E6CF       0252       INC  NEWSET+1        ;bump hi-bytes
061E CA         0260       DEX                  ;outside loop
061F D0F0       0270       BNE  LOOP1           ;next 256 bytes
0621 60         0280       RTS                ;return from usr routine
```

SCROLLING

Vertical Fine and Coarse Scrolling

JB 9/82

A smooth scrolling effect is achieved by combining fine and coarse scrolls. Fine scrolling moves the character to the next pixel. Fine scrolling uses special registers, HSCROL and VSCROL, together with the scrolling-enable bits in the display list mode lines. Coarse scrolling is most easily done by manipulating the Load Memory Scan (LMS) address in the display list.

All display list instructions use the lower nybble. The top nybble is reserved for the four special display list functions:

D4: Enable Horizontal Fine Scrolling
D5: Enable Vertical Fine Scrolling
D6: Load Memory Scan Register
D7: Display List Interrupt

When bit D5 is set on a display list instruction, vertical fine scrolling is enabled on that line. Using decimal numbers, add 32 to each mode line to enable fine scrolling on the whole screen.

Once fine scrolling is enabled, set the VSCROL register (54277, or $D405). The number at VSCROL is the number of horizontal scan lines to scroll. Each pixel takes up 1 to 16 scan lines, depending on the mode. In BASIC mode 2, for example, each pixel is 16 scan lines high. To scroll a character halfway up the pixel, the value in VSCROL would be 8.

To fine scroll from one end of the pixel to the other, VSCROL must be incremented from 0 to 16, or decremented from 16 to 0. The character moves across the pixel until it reaches the last line. At this point, switch to the coarse scroll, to move it to the next pixel. VSCROL is set back to the other end, so that the image shows up on the correct side of the new pixel.

To accomplish a coarse scroll, change the LMS address by one line length. The LMS address is the starting location of screen memory. If screen memory starts one line length later, the whole screen image moves up one line. Remember that different modes take different numbers of bytes per line. BASIC mode 2 takes 20 bytes per line, so to scroll the screen up one pixel, add 20 bytes to the LMS address. In a default display list, the first mode line (the fourth byte in the list) has the LMS bit set. The following two bytes (the fifth and sixth bytes in the display list) contain the LMS address.

The example on the following page sets up a display list for BASIC mode 2, which is ANTIC mode 7. Each mode line has the vertical scroll bit set, resulting in the instruction 39 (7+32). The first mode line also has the LMS bit set (7+32+64=103) and is followed by the LMS address. The original address is 0. The screen display moves through memory from the beginning. If you look carefully you can see the Real Time Clock at locations 18,19 and 20.

The machine language routine, which is executed during the vertical blank, increments the VSCROL register from 0 to 16. When it reaches 16 it is set back to 0, and the LMS address is incremented by a line length of 20. If the low byte exceeds 255, the high byte is incremented.

In the example the screen is scrolled smoothly through memory. In your own program, of course, scroll from the start of your own screen data to the end of your extended data area. For any scrolling screen, you must set the data yourself, so that the LMS points to an area with valid data in it.

```
1 REM SCROLL
2 REM WB/JB 8/82
3 REM Vertical fine scrolling: a vblank routine scrolls through memory
4 REM using mode 2
5 REM ************************************************************************
10 GRAPHICS 2
20 REM ***** data for vblank code:(listing follows) *****
30 DATA 206,80,6,208,18,169,2,141,80,6,238,81,6,173,81,6,201,16,240,6
31 DATA 141,5,212,76,98,228,169,0,141,81,6,141,5,212,173,3,156,24,216,105
32 DATA 20,141,3,156,173,4,156,105,0,141,4,156,76,23,6
39 REM ***** data for display list *****
40 DATA 112,112,103,0,0,39,39,39,39,39,39,39,39,39,39,39,39,7,65,0,156
45 REM ************************************************************************
50 FOR I=1536 TO 1590:REM poke in vblank code on page 6
55 READ X:POKE I,X
60 NEXT I
70 FOR I=39936 TO 39956:REM poke in modified display list
75 READ X:POKE I,X
80 NEXT I
85 POKE 560,0:POKE 561,156:REM location of new display list
90 REM ************************************************************************
100 POKE 54286,0:REM disable nmi
110 POKE 548,0:POKE 549,6:REM set up vblank vector
120 POKE 54286,64:REM reenable nmi
```

```
                10 ;SCROLL
                20 ; WB/JB 8/82
                30 ;
                40 ;DEFINITIONS
D405            50 VSCROLL  =    $D405
9C03            60 LMS      =    $9C03
0650            70 SPEED    =    $650
```

```
0651            80 TSCROLL  =    $651 ;temp shadow for scroll value
E462            90 XITVBV   =    $E462
0000            0100        *=   $600
                0110 ;
0600 CE0006     0120        DEC  SPEED
0603 D012       0130        BNE  END
0605 A902       0140        LDA  #2          ;default speed every other vblank
0607 8D0006     0150        STA  SPEED
060A EE0106     0160        INC  TSCROLL
060D AD0106     0170        LDA  TSCROLL
0610 C910       0180        CMP  #16         ;top of pixel?
0612 F006       0190        BEQ  COARSE      ;yes, coarse scroll
0614 8D05D4     0200        STA  VSCROLL     ;no, fine scroll
0617 4C62E4     0210 END    JMP  XITVBV
061A A900       0220 COARSE LDA  #0
061C 8D0106     0230        STA  TSCROLL  ;back to bottom of pixel
061F 8D05D4     0240        STA  VSCROLL
0622 AD039C     0250        LDA  LMS
0625 18         0260        CLC
0626 D8         0270        CLD
0627 6914       0280        ADC  #20         ;add a line length to lms address
0629 8D039C     0290        STA  LMS
062C AD049C     0300        LDA  LMS+1
062F 6900       0310        ADC  #0
0631 8D049C     0320        STA  LMS+1
0634 4C1706     0330        JMP  END
```

SCROLLING
Horizontal Fine and Coarse Scrolling
JB 9/82

A smooth scrolling effect is achieved by combining fine scrolling, (moving an image across a pixel) with coarse scrolling (jumping an image to the next pixel). Fine scrolling requires two things: 1) a scrolling bit must be set in the display list instruction, and 2) the scrolling register must keep track of how far the image has gotten across the pixel. When the image is all the way across, it must be jumped to the next pixel. The coarse scroll is accomplished by changing the Load Memory Scan (LMS) address in the display list, so that it looks for data lower or higher in memory.

Horizontal scrolling differs from vertical scrolling in two important ways:

1) For horizontal coarse-scrolling, each horizontal line of data is defined separately. LMS must be set on every mode line of the display list. Instead of simply adding a line length to the one starting address of the screen, add (or subtract) one byte from the starting address of each line of display data.

2) The direction of the fine and coarse scrolls are opposite; when you reach the highest value in HSCROL, subtract from the LMS addresses. When you reach the lowest value, add to the LMS addresses. With vertical scrolling, the directions are the same. The values of VSCROL and of the LMS address both decrease or increase.

The vertical fine scroll value (at VSCROL) is measured in scan lines. The horizontal fine scroll value (HSCROL) is measured in color clocks. Different modes have different numbers of scan lines and color clocks per pixel. If the number of color clocks in the mode you are using is less than 16 (as it is in the example) you may fine-scroll across more than one pixel. The example on the following page fine-scrolls across 2 pixels, and then jumps each LMS address by 2 bytes.

You must use a customized display list for any kind of scroll. For vertical scrolling, simply set the Fine-Scroll bits of existing instructions. For horizontal scrolling, set both the Fine-Scroll bit and the Read-LMS bit on each instruction, and then follow each instruction with the two-byte address of the data area for that line.

The total data area for a line is determined by how far you want to scroll. For example, if your mode line is normally 20 bytes long, and you want to scroll across 4 screens of data, each data line must by 80 bytes long. Each LMS address would be the same as the last, plus 80.

In the example, each line of data is assumed to be 255 bytes long, and to start on a page boundary in memory. This simplifies the LMS-updating algorithm, as we do not have to worry about the low byte. In your own application, set up the data the way you want it. Take into consideration that a line of data may cross a page boundary, and you must update the low byte when necessary.

```
1 REM HORIZONTAL SCROLL
2 REM WBB/JB 9/82
3 REM set up custom display list, use VBLANK routine to smooth-scroll
4 REM horizontally.  Each line is 255 bytes long, (one page of memory)
5 REM of which 20 bytes are displayed at one time.
6 REM ************************************************************************
10 GRAPHICS 0:PRINT "SETTING UP CUSTOM DISPLAY LIST..."
20 RESTORE 1000:REM .                    get data for custom display list
30 DL=16336:REM .                        display list will start at top of 16K
40 READ INSTRUCTION
50 IF INSTRUCTION=-1 THEN GOTO 100
60 POKE DL,INSTRUCTION:REM .             poke in display list instructions
70 DL=DL+1:GOTO 40
99 REM ************************************************************************
100 PRINT "SETTING UP VBLANK ROUTINE..."
110 RESTORE 2000:REM .                   data for vblank code--listing follows
120 ADDRESS=1536
130 READ BYTE:IF BYTE=-1 THEN 200
140 POKE ADDRESS,BYTE:REM .                poke  in  object  code  for  scroll
routine
150 ADDRESS=ADDRESS+1:GOTO 130
199 REM ************************************************************************
200 POKE 560,208:POKE 561,63:REM .       point to new display list
210 NMIEN=54286:VVBLKD=548:REM .         set up vertical blank vector
220 POKE NMIEN,0
230 POKE VVBLKD,0:POKE VVBLKD+1,6
240 POKE NMIEN,64
250 END :REM .                           VBLANK routine is in place...
260 REM .                                use joystick 0 to scroll screen
999 REM ************************************************************************
1000 DATA 112,112,119,0,1,119,0,2,119,0,3,119,0,4,119,0,5,119,0,6
1010 DATA 119,0,7,119,0,8,119,0,9.119,0,10,119,0,11,119,0,12
1020 DATA 87,0,13,65,208,63,-1
1999 REM ************************************************************************
2000 DATA 173,48,2,133,203,173,49,2,133,204,173,120,2,41,4,208,3,32,82,6
2001 DATA 173,120,2,41,8,208,3,32,33,6,76,98,228,173,254,6,201,15,240,10
2002 DATA 24,105,1,141,254,6,141,4,212,96,160,3,177,203,201,0,208,1,96,169
2003 DATA 0,141,4,212,141,254,6,177,203,56,233,2,145,203,200,200,200,192,42
2004 DATA 208,242,96,173,254,6,201,0,240,10,56,233,1,141,254,6,141,4,212,96
2005 DATA 160,3,177,203,201,234,208,1,96,169,15,141,4,212,141,254,6,177,203
2006 DATA 24,105,2,145,203,200,200,200,192,42,208,242,96,224,2,225,2,0,0,-1
```

ATARI Macro Assembler Ver 1.0A

```
*HORIZONTAL SCROLL
* VERTICAL BLANK ROUTINE
```

```
                    * read joystick Ø and scroll screen right or left
                    *  WBB/JB 9/82
                    *
                    * definitions
                    *
     = E462         XITVBV = $E462 ;exit vector
     = D4Ø4         HSCROL = $D4Ø4 ;horiz scroll register
     = Ø6FE         HSHADW = $6FE ;keep own RAM shadow
     = Ø278         STICKØ = $278 ;joystick Ø register
     = ØØCB         LMS = $CB ;temp lms adr
     = Ø23Ø         DL = $23Ø ;display list pointers
                    *
ØØØØ= Ø6ØØ           ORG $6ØØ
                    *
Ø6ØØ AD3Ø02         LDA DL ;display list location is starting point
Ø6Ø3 85CB           STA LMS ;from which to find lms adr
Ø6Ø5 AD31Ø2         LDA DL+1
Ø6Ø8 85CC           STA LMS+1
                    *
                    * check joystick for horizontal motion
                    *
Ø6ØA AD78Ø2         JOY1 LDA STICKØ
Ø6ØD 2904           AND #4 ;check bit d3 (ØØØØ Ø1ØØ)
Ø6ØF DØØ3 ^Ø614     BNE JOY2 ;if not Ø, keep checking
Ø611 2Ø52Ø6         JSR LEFT ;if Ø, go move image left
Ø614 AD78Ø2         JOY2 LDA STICKØ
Ø617 2908           AND #8 ;check bit d4 (ØØØØ 1ØØØ)
Ø619 DØØ3 ^Ø61E     BNE END ;if not Ø, exit
Ø61B 2Ø21Ø6         JSR RIGHT ;if Ø, go move image right
Ø61E 4C62E4         END JMP XITVBV ;exit normally
                    *
                    *right and left scroll routines
                    *
                    ****** scroll right ******
                    *
                    * fine scroll
                    *
Ø621 ADFEØ6         RIGHT LDA HSHADW ;remember last fine-scroll value
Ø624 C9ØF           CMP #15 ;limit of fine scroll? (2 pixels)
Ø626 FØØA ^Ø632     BEQ R1 ;yes, go do coarse scroll
Ø628 18             CLC #15 ;otherwise, do fine scroll
Ø629 69Ø1           ADC #1
Ø62B 8DFEØ6         STA HSHADW ;keep new value
Ø62E 8DØ4D4         STA HSCROL ;update register
Ø631 6Ø             RTS
                    *
                    *** coarse scroll ***
                    *
Ø632 AØØ3           R1 LDY #3 ;new lms adr every 3 bytes
Ø634 B1CB           LDA (LMS),Y ;we're only looking at lo byte
Ø636 C9ØØ           CMP #Ø ;limit of line size?
Ø638 DØØ1 ^Ø63B     BNE R2 ;no, do coarse scroll
Ø63A 6Ø             RTS ;yes, limit reached, return
                    *
Ø63B A9ØØ           R2 LDA #Ø ;reset fine-scroll register
Ø63D 8DØ4D4         STA HSCROL
```

```
0640 8DFE06          STA HSHADW
                     *
0643 B1CB           R3 LDA (LMS),Y ;get each lms lo-byte
0645 38              SEC
0646 E902            SBC #2 ;subtract 2 to move 2 pixels right
0648 91CB            STA (LMS),Y
064A C8              INY
064B C8              INY
064C C8              INY ;new lms every 3 bytes
064D C02A            CPY #42 ;last one?
064F D0F2 ^0643      BNE R3 ;no, keep going
0651 60              RTS ;yes, all lines scrolled, return
                     *
                     ****** scroll left ******
                     *
                     * fine scroll
                     *
0652 ADFE06         LEFT LDA HSHADW ;remember last fine scroll value
0655 C900            CMP #0 ;end of pixel?
0657 F00A ^0663      BEQ L1 ;yes, go do coarse scroll
0659 38              SEC ;no, continue fine scroll
065A E901            SBC #1
065C 8DFE06          STA HSHADW ;remember new value
065F BD04D4          STA HSCROL ;update register
0662 60              RTS ;fine scroll done, return
                     *
                     * coarse scroll
                     *
0663 A003           L1 LDY #3 ;lms lo byte every 3 bytes
0665 B1CB            LDA (LMS),Y ;check current lms lo byte
0667 C9EA            CMP #234 ;limit of line size?
0669 D001 ^066C      BNE L2 ;no, continue
066B 60              RTS ;yes, limit reached, return
                     *
066C A90F           L2 LDA #15 ;reset fine scroll register (2 pixels)
066E 8D04D4          STA HSCROL
0671 8DFE06          STA HSHADW
                     *
0674 B1CB           L3 LDA (LMS),Y ;get each lms lo-byte
0676 18              CLC
0677 6902            ADC #2 ;move 2 pixels
0679 91CB            STA (LMS),Y
067B C8              INY
067C C8              INY
067D C8              INY ;next lms, 3 bytes later
067E C02A            CPY #42 ;last one?
0680 D0F2 ^0674      BNE L3 ;no, keep going
0682 60              RTS ;yes, return
```

PRINTWIZ

Reviewed by Bob Janoske

After purchasing an Epson MX8Ø w/Graftrax printer approximately eight months ago, I was content to use it for word processing and generating hardcopies of listings (sans graphic and control characters, of course). However, in the back of my mind, I always wished I could take full benefit of the Epson's graphic capabilities. Oh, I tried public domain screen dumps (COMPUTE's 49 second, etc.), but I was never quite satisfied with them. I especially disliked pictures and designs printed sideways.

Thanks to PRINTWIZ from Allen Macroware of Redondo Beach, CA, my search for the ideal screen dump is over. Actually, PRINTWIZ is more than just a screen dump program. It is a highly versatile printer utility designed to allow ATARI users who shelled out the extra bucks for a printer with graphics capabilities to get their money's worth.

PRINTWIZ's opening menu lists choices of the following printers:

1. Epson (MX & FX), Gemini 1ØX
2. Gemini 1Ø
3. Prowriter
4. NEC 8Ø23
5. Okidata 92
6. Okidata 82A

Upon pressing the appropriate number key, PRINTWIZ continues to load the printer driver and main dump program (about 1.3K) into low RAM. Memory pages 4 and 6 are still available for use, however, avoid programs writing below LOMEM or those stealing the keyboard interupt vector.

When PRINTWIZ is booted, a special RAM resident Disk Utility Package (DUP) is also loaded. Being RAM resident (and only 768 bytes), DOS can be called instantly and without losing the screen dump utility or your program. Once booted, PRINTWIZ is ready to horizontally dump anything that passes before you on the screen; from another program, DOS, or even ATARI MEMO PAD. Yes, finally a use for MEMO PAD.

The screen dump utililty functions are selected while pressing the CONTROL and SHIFT keys simultaneously. Functions can also be set from within a program by utilizing addresses furnished in conjunction with a USR routine (in BASIC) or JSR (Mach. Lang.).

PRINTWIZ screen dump functions include centering, inverse printing, double height, cancel extra line feed (allows smooth connecting of screens), choice of single, double, triple, or quad dot width, short screen dump, print, and abort. Manipulation of these functions allows interesting combinations of screen dumps and text.

In addition to the screen dump utility, PRINTWIZ includes a LISTER program for listing programs, record files, or source codes with ALL graphic and control characters printed. Three list modes are available: 4Ø column, in regular or condensed, and 8Ø column condensed. The 4Ø column modes print the listing just as it appears on the screen. This is handy for checking for typos in programs entered from magazines. LISTER does not require the screen dump and may be copied to other disks.

(continued on next page)

PRINTWIZ (continued)

Other useful demo programs are also included.Using them in various combinations, you can generate custom stationery and forms.

GRLOD dumps screens created by programs such as MICROPAINTER, GRAPHICS MASTER, PAINT and GTIA DRAW; any file of 7680 bytes. This includes graphic modes 7 1/2, 8, 9, 10, and 11.

LODFNT allows loading of different character fonts. PRINTWIZ includes fonts for cursive, computer, and modern style print. I use LODFNT frequently in conjunction with the ATARI MEMO PAD to set up a quick chart or message that aren't worth writing an entire program for.

CAL generates a calendar for any month of any year. Using the various screen dump functions, the size of the calendar can be custom tailored. LODFNT can be used to control the style of print on the calendar. Combining CAL with GRLOD and 12 screen drawings, the ambitious computerist can create a nice calendar for the entire year.

LABLER prints lables of your creation on 1 X 3.5" AVERY type stick on lables. Instructions are included for making 1.5 X 4.0" lables.

In all, I found PRINTWIZ to be a valuable asset to my printer. It is easy to use and has excellent error trapping. Does it have a drawback? Well, yes it does. I sure use a lot of paper and printer ribbons.

PRINTWIZ is available for $26.95 postpaid from Allen Macroware, P.O. Box 2205, Redondo Beach, CA 90278.

— — — — — — — — — — — — — —

BASIC CLASSES BEGIN AGAIN

The 1st of eight classes will start at this month's Saturday meeting. The classes will cover the beginnig commands and progress to data file.

Classes are scheduled to meet 2 times each month, on the 1st Thursday and the 3rd Saturday. The Thursday meetings will begin at 7:00 PM and at 1:00 PM on Saturday. The cost will be $20.00 for all eight classes.

Saturday - 1:00 PM	Thursday - 7:00 PM
February 18th	March 1st
March 17th	April 5th
April 21st	May 3rd
May 19th	June 7th

Contact Linda Scott @ 466-2314 to registar and fro further information.

— — — — — — — — — — — — — —

EXPOSIUM 84
(continued from page 2)

OTHER SESSIONS

Hands-on Sessions
Tue. 3:45-5:45PM & 6:00-8:00PM
Wed. 3:45-5:45PM & 6:00-8:00PM

These hands-on sessions are designed to allow attendants an opportunity to evaluate equipment without pressure to purchase. Attendants will actually spend two hours learning how to operate the equipment. Available equipment is listed below.

Wang - word processors & PC's
Fortune - data/word processing
Digital Equipment - personal computers
Olivetti - Electronic typewriters
CPT - word processors
NBI - word processors
Apple - personal computers
Burroughs - small business computers
Sony - word processors
Seiko - personal computers
Epson - personal computers
Televideo - personal computers
Compaq - personal computers
Texas Instruments - personal computers
IBM - personal computers
Hewlett Packard - personal computers

For a complete listing of the 44 seminars to be offered on Tuesday, Wednesday and Thursday, pick up a brochure at our next meeting or call Gary Nolan to have one mailed to you.

All members of MILATARI will be receiving tickets for admittance to the exhibition floor. There are charges to attend the seminars, breakfasts, luncheons, and the Gala Event. These charges will vary from $15 for the evening seminars to $60 for the daytime seminars. You can avoid paying these charges when you volunteer to be a host\hostess for the event you are interested in. See page 4 for information on how you can help at the show.

We hope each MILATARI member will be able to attend EXPO84 in April. When you are making your plans, invite a friend - we can supply you with all the tickets you need.

THE TRANSLATOR

For Atari XL Computer Owners

(The TRANSLATOR disk is available in our disk library .. ED)

The Translator disk was developed to allow the use of all programs written for the 400/800 that will not work on the XL computers.

The Translator comes in two versions on two different diskettes. The first disk, letter A, will work with almost 95% of the programs that don't work on the XL computers. The second disk, letter B, is used the same as letter A, but only when the first disk doesn't run the 400/800 software. The second disk will run the remaining 5% of the programs.

There are two different screens that show up when the Translator is used. There is no order as to which screen will appear when loading the Translator.

When using the Translator, follow the initial power-up sequence as required by the owners manual of the computer and the operating manual of the software about to be loaded. For example, if the 850 will be used, turn it on, or if Basic is required, insert the cartridge. However, do not turn on the computer yet.

Insert the Translator into the disk drive. Turn on the computer. The Translator will boot into the computer and load the 800 Operating System. At this point, the computer is now using the 800 OS. The screen will prompt you to remove the Translator disk and insert the disk you want to boot. After closing the drive door, press SELECT. The computer will ACT as though it was an 800 and the power was just turned on.

Do not turn off the power and turn it back on. This will obviously erase the memory and the 800 OS along with it.

This loading process described above must be used every time the computer is turned on when 800 software is to be used.

NEWSLETTER INFORMATION:

This newsletter is written and printed by members of the Milwaukee Area ATARI User's Group (MILATARI), an association of individuals with a common interest in using and programming ATARI computers. MILATARI is not affiliated with the ATARI company or any other commercial organizations.

All articles are written and donated by the membership. Opinions expressed in this publication are those of the individual author and do not necessarily represent, nor reflect, the opinions of MILATARI nor those of any other commercial or non-commercial organizations. Any article appearing in this newsletter may be reproduced, providing credit is given to the author and to MILATARI.

Your contribution of articles are always welcome. You may submit your article on ATARI compatible cassette, diskette, on typewritten form, or you can arrange with the editor to download your file via a modem at either 300 or 1200 BAUD. When submitting your article on cassette or diskette, please do not include any format control codes imbedded within the text. Deadline for articles is the last day of each month for inclusion on the next issue.

Write MILATARI NEWSLETTER, P.O. Box 1191, Waukesha, WI 53187-1191 for more information.

MEMBERSHIP INFORMATION:

Membership is open to individuals and families who are interested in using and programming ATARI computers. The membership includes a subscription to this newsletter and access to the clubs cassette, diskette and publication libraries.

There are 3 classes of memberships available. Associate, Individual and Family. Associate members can attend all club functions and may withdrawal materials from the club libraries. In addition to attending club functions and checking out materials from the libraries, Individual and Family members are entitled to vote in club elections and to hold elected position in the organization. The annual membership fees are $10.00 for associate, $15.00 for individual, and $20.00 for the family membership. Members are expect to abide by the by-laws of the club. You may receive a copy of the by-laws by contacting the club secretary.

For more information on how to join MILATARI, please contact the membership committee.

MEETING INFORMATION:

MILATARI meetings are held once monthly. The meetings are currently being held at the Armbruster School, 7000 Greenway, Greenfield. (Off 68th Street, behind Southridge Shopping Center.) The date of the meeting is the third Saturday of each month. Doors are open at 2:00PM. An agenda of the next meeting can be found elsewhere in this newsletter. For more specific details on the agenda for the next scheduled meeting, please contact the Vice President.

MILWAUKEE AREA ATARI USER'S GROUP

MILATARI Officers:

President	Gary Nolan	353-9716
Vice President	Chris Stieber	529-2663
Treasurer	David Frazer	542-7242
Secretary	open	
Education Committee	Linda Scott (Chairperson)	466-2314
	Joe Sanders (SIG Chairman)	447-1660
	Erick Hansen (Instructor)	252-3146
Cassette Librarian	Ron Friedel	354-1717
Disk Librarian	Bill Lawrence	968-3082
	Carl Mielcarek	355-3539
Publication Librarian	Marcus Hagen	445-0710
Membership Committee	Dennis J. Bogie	968-9341
	Sharon Gamache	421-2887
Newsletter Editor	David Frazer	542-7242
Bulletin Board SYSOP	Pete Kurth	355-6031(BBS)

****

TECHNICAL SUPPORT GROUP:

The following members have indicated a willingness to assist MILATARI members with programming and other related technical problems. Please be polite and do not call these members during meal periods or at very early or very late hours.

William Lawrence	Programming	1-968-3082
Don Wilcox	Programming	228-1650
Erik Hansen	Prog/Tech	252-3146
Gary Nolan	Prog/Tech	353-9716
Steve Booth	Programming	367-8739
Nick Liberski	Prog/Tech	782-5594
David Frazer	Prog/Tech	542-7242

****

MILATARI BULLETIN BOARD:

The Milwaukee Area ATARI Users Group maintains a 24 hour bulletin board service. This board is designed for the use of our members and other ATARI users around the country. The BBS allows for upload and downloading programs and files, a public message board and club news. The board operates at 300 BAUD. The phone number is (414)355-6031.

==========

MILATARI NEWSLETTER
P.O. Box 1191
Waukesha, Wisconsin 53187-1191

U.S. Postage
BULK RATE
PAID
Permit # 201
Waukesha, WI 53187

==========

ADDRESS CORRECTION REQUESTED FORWARDING POSTAGE GUARANTEED

==========

MEETING ADGENDA
++++++++++++++++

1:30 Officers meet
2:00 Libraries open
2:30 Tech session
4:00 Feature program - Dr. Marilyn Levine and her Information Machine

2:00 Workshop on Tax Programs
3:30 Business meeting

- -

!Last minute correction to Mosaic 64K Select Fix !
!Step one should read: Locate pin 11 of U17, cut !
!trace that extends from pin 11 to the right. !

- -

MAIL Family Aug 84
Joseph Griesemer
2550 Kettle Moraine Drive
Hartford, WI 53027